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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/587,394	06/05/2000	Raoul Florent	PHF 99,548	8430

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EXAMINER

PATEL, SHEFALI D

ART UNIT	PAPER NUMBER
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2621

DATE MAILED: 09/07/2004

19

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/587,394

Applicant(s)

FLORENT, RAOUL

Examiner

Shefali D Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/14/04.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-20 and 26-29 is/are rejected.
- 7) ☒ Claim(s) 21-25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date. _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The response to a non-final office action dated March 11, 2004 was received on June 14, 2004.
2. Amendment to the specification has been entered.

Response to Arguments

1. Applicant's arguments filed on June 14, 2004 have been fully considered but they are not persuasive. The applicant argue on page 11 under section B regarding rejected claims 16-17 and 28 under 35 U.S.C. 102(b) as being anticipated by Ito.

Applicant states on page 11: "Ito fails to disclose and teaches away from "marching a front of points forward starting at predetermined start point until a predetermined end point of the grid is reached to thereby identify at least one track formed by succeeding point denoted fathers and corresponding children of the threadlike structure" as recited in independent claim 16, and "means for setting end points within the image of potentials, the end points including a start point and an end point between which a path following the threadlike structure is to be determined" as recited in independent claim 28."

The examiner disagrees.

Ito discloses marching a front of points forward starting at a predetermined start point (i.e., ROOT in Fig. 2) until a predetermined end point (the tree structure is being formed as seen in See, col. 6 line 56 to col. 7 lines 1-42) of the grid is reached to thereby identify at least one

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track formed by succeeding points denoted fathers (i.e., point 'a') and corresponding children (i.e., point 'i') of the threadlike structure (Figures 2 and 10) (identifying at least one track 'abcd', 'afhik', etc. using the procedure P at col. 7 line 50 as recited in independent claim 16; and "means for setting end points within the image of potentials, the end points including a start point and an end point between which a path following the threadlike structure is to be determined" as recited in independent claim 28 (See, col. 8 lines 30-32, 67-68 to col. 9 lines 1-13).

Applicant further argue on page 11 stating that the tracks 'afhik', 'abcd', 'apq', etc. are known prior to front marching along the tracks to determine the length of the tracks as disclosed in Ito at col. 5 lines 51 to col. 6 line 19.

The examiner disagrees.

Ito discloses obtaining each node (N1, N2, N3,...) and each access path (P1, P2, P3,...). Ito discloses each node with a buffer having n arrays where the result of the stage corresponding to the node is stored. Each node is stored prior to obtaining the next one in order to obtain the entire path on which the node lays on (i.e., predetermined start/end point as claimed in claim 16).

Further, the applicant argue regarding 35 U.S.C. 112 2nd paragraph rejection made to claims 18-25 and 29 stating that "the applicant uses the ordinary meaning of the terms "law of location", "city block distance" and "law of filiation" as known in the art in the description of the present invention and in recitation of the terms in claims 18-25 and 29." The examiner studied the substitute specification filed on February 5, 2004. The "city block distance" represented by

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L_k is defined on page 11 line 16-17. Therefore, the rejection of 35 U.S.C. 112 2nd paragraph regarding the term “city block distance” has been withdrawn.

Nonetheless, the terms “law of location” and “law of filiation” are not clearly defined in the specification. The Filiation Front Marching technique is disclosed on page 5 lines 8-10 and line 34 to page 6 lines 1-4 and throughout the specification. But, the terms are indefinite because the specification does not clearly define them. Hence, these terms from the claim are considered ambiguous, see the new 112 rejection below.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 18-20, 26-27, and 29 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The terms “law of location” and “law of filiation” in claim 29, “law of location” in claims 18-19, “law of filiation” in claim 20, are indefinite. The terms are indefinite because the specification does not clearly define the term. These terms from the claim are ambiguous.

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4. Claims 26-27 are rejected for the same reasons as claim 20.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 16-17 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Ito (US 5,067,166).

With regard to **claim 16** Ito discloses an image processing method of extracting points of a path following a threadlike structure in an image formed by a grid of potential points (Figure 6 and it's respective portion in the specification), the image processing method comprising: marching a front of points forward starting at a predetermined start point (i.e., ROOT in Fig. 2) until a predetermined end point (the tree structure is being formed as seen in See, col. 6 line 56 to col. 7 lines 1-42) of the grid is reached to thereby identify at least one track formed by succeeding points denoted fathers (i.e., point 'a') and corresponding children (i.e., point 'i') of the threadlike structure (Figures 2 and 10) (identifying at least one track 'abcd', 'afhik', etc. using the procedure P at col. 7 line 50; and back propagating the front along a first track (See, col. 8 lines 30-32) starting at the end point (point 'k') through the children (point 'i') and the fathers (point 'a') of the first track until the start point is reached whereby the points of the path following the threadlike structure in the image are extracted (See, col. 8 lines 67-68 to col. 9 lines 1-13).

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With regard to **claim 17** Ito discloses conditionally selecting a first child of the grid to succeed a first father of the grid to form the first track (Ito obtain a first track by selecting a first child (i.e., 'i') after selecting a first father (i.e., 'a'). See, procedures P1 to P7 conditionally executing in Figure 7 and it's respective portion in the specification).

Claim 28 recites identical features as claim 1 except claim 28 is a system claim. Thus, arguments similar to that presented above for claim 1 is equally applicable to claim 28. Applicant's attention is further invited to Figure 1 of Ito's for a system.

Allowable Subject Matter

2. Claims 21-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The closest prior art to Ito is directed to an image processing method of extracting points of a path following a threadlike structure in an image formed by a grid of potential points as disclosed in an independent claims 16 and 28. However, the closest prior art fails to disclose anything about a function of cumulated costs associated with the first child being calculated as a potential mean value by the equation recited in claim 21 where k is the total number of current points between the start point and the first child, Q_j are the potentials at the current points located between the start point and the first child, and L_k is the length of a path between the start point and the first father calculated using a city block distance law as disclosed in claim 21. It is for these reasons in combination with all the other elements of the claim that claim 21 would be

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allowable if rewritten in independent form including all of the limitation of the base claim and any intervening claims. Claims 22-25 are allowable for the same reason as claim 21.

Conclusion

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shefali D Patel whose telephone number is 703-306-4182. The examiner can normally be reached on M-F 8:00am - 5:00pm (First Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo H Boudreau can be reached on 703-305-4706. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


DANIEL MIRIAM
PRIMARY EXAMINER
August 31, 2004

Shefali D Patel
Examiner
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